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07/325,690 03/20/89 VOLBRECHT

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10/02/89

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449, <u>MODIFIED</u> . | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input checked="" type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-15, 28-35 are pending in the application.
Of the above, claims 16-27 are withdrawn from consideration.
2. ☒ Claims 16-27 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-15, 28-35 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☒ The proposed drawing correction, filed on 7-3-89, has been ☒ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Art Unit 246

15. Claims 16-27 withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a nonelected invention. Election was made without traverse in Paper No. 5.

16. The submitted Marshall Thermocouples publication, cited on the modified PTO-1449 form, (paper No. 3), has been cited of record. It is noted ~~however~~ that applicant has not supplied a publication date, therefore.

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one (1) year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

18. *Only* Claims 1-4, 10, 12, and 14 are rejected under 35 U.S.C. 102a, ~~as~~ as being anticipated by Frazier and/or Stevens.

The pair of conductive wires in Frazier are the elements 12 and 13 and the compacted compressible material 14 as, for example, the known oxide magnesium oxide. Also, in the Figure 4 embodiment in the patent to Stevens, it may be pointed out that the use of at

Art Unit 246

least one oxide, magnesium oxide and/or aluminum oxide powder, is disclosed as being compressed around sensor tube 78 and insulator 80 to provide an insulating and cushioning effect, with the tube 76 being swaged to a reduced diameter in column 3, lines 42-50 and in columns 4-5.

19. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

20. Claims 5-9, 11, 13, 15 and 28-35 are rejected under 35 U.S.C. 103 as being unpatentable over Frazier and/or Stevens as applied to claims 1-4, etc. above, and further in view of Barga, Kortan or Clawson et al.

The patents to Frazier and Stevens teach every positively recited structural limitation in the claims, as for example in claims 1-4, and may fail to anticipate claims 5-6 and 15 only in the recitation of known moisture barrier means and strain relief means, respectively. The patent to Clawson et al discloses

known strain relief means 38 in a temperature probe which also will function to be a moisture barrier. The devices in Barga and Kortan disclose plastic separator means 16 and means 21, respectively, that are moisture barrier means, as recited. It would have been obvious to a person having ordinary skill in the art, in view of the teachings in Barga, Kortan, or Clawson et al, to provide the temperature sensing probe device means in Frazier and/or in Stevens with known moisture barrier means, such as the type recited by Claims 5-6 and/or known strain relief means (claim 15) for the elements in the probe means for protecting the elements therein from moisture and breakage due to strain from the movement of the elements therein. The usage of an RTD sensor for either an equivalent thermistor sensor or thermocouple sensor (Claim 12) is obvious and is well known in the art. Further, the calling for a specific mounting arrangement of sizing the relative components, as for example in Claims 28-32, etc., would have been obvious in meeting the terms of the device as recited, since no new nor unexpected result would be produced thereby.

21. The following patents are cited of interest. The patent to Grimm et al in disclosing strain relief means 5 for a sensor probe with the sensor 12 embedded in a heat filling 11. The patent to Kleven in disclosing spaced barrier means 24, 31, etc., in temperature probe means. Stroud et al in disclosing a thermocouple assembly with a powder 20 and a surrounding tube 15. The patent to Micheli et al in disclosing a

Serial No. 325690

-5-

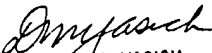
Art Unit 246

probe means with sensor means 12 embedded in a alloy 24. The patent to Gotcher in disclosing the packing for the sensor may be electrically or thermally insulating or both. The patent to Carroll in teaching a packed material for a sensor and factors causing strain related damage.

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9/12/89


DANIEL M. YASICH
PRIMARY EXAMINER
ART UNIT 246